Preventing the Onset of Change Resistance in an Organisational Context by Means of Increasing the Level of Ambiguity Tolerance

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Abstract

In an ever-changing world, it is essential to possess a set of abilities needed to easily adapt to the novelties around us. Literature on this topic abounds with textbooks for organisational survival during change. Change management has become, in a relatively short period of time, a reference discipline in Economy. The concept of ambiguity tolerance is, however, less popular. We have a tendency of being proud of how tolerant we are, without having a rich theoretical background to help us define what it exactly means to be tolerant.

Our paper aims to highlight the essential role played by ambiguity tolerance in this society, where there is a stringent need for organisations to adapt to the quick pace of changes occurring.

We have therefore used an instrument meant to measure ambiguity tolerance and two instruments meant to measure the degree to which individuals are able to adapt to change; the data that we obtained from applying these instruments was used to prove a correlation between the two concepts, taking as a starting point the premise that, should there be a statistically proven link between ambiguity tolerance and adapting to organisational change, then by moderating one of the variables (i.e. ambiguity tolerance) we will be able to modify the other one as well. We could establish, by analysing the eight dimensions of the ambiguity tolerance concept, which were the areas where an intervention would be needed, in order to prevent the onset of resistance to change.

Keywords*: ambiguity tolerance, generic change, organisational change, change management, adapting to change*

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I. INTRODUCTION

Globalization and technological breakthroughs result in an ever-growing, ever-updating, ever-changing business environment. This brings higher pressure on organisations, forced to learn how to feel comfortable in a context that is defined by perpetual change. It is therefore essential for both organisations as economic entities, and for the members of the organisation to gain the ability of managing and of adapting to the constant fluctuations of the environment where they work (Beitler, 2006). It is absolutely necessary for each of the organisational departments to learn how to handle changes in a manner that least affects the efficiency of the institution as a whole (Bridges, 2004).

When researching literature on this topic we noticed the mentioning of the concept of ambiguity tolerance in the context of elements which might facilitate a better functioning of companies. We have therefore set out to deepen our understanding of the role played by ambiguity tolerance in the process of organisational change, aiming to find ways of preventing the onset of resistance to change.

II. DEFINING THE TERMS

For a better understanding of the concepts dealt with in this paper we need to define the key words which will help us build the theoretical framework.

According to David S. Werman, *Ambiguity refers mainly to signification and can be defined in two different ways: the first refers to a lack of precision, to uncertainty or to unclear meanings; the second refers to the presence of two or more meanings* (Werman, 1979).

The term ambiguity tolerance refers to how an individual or a group perceives and processes information regarding ambiguous situations or stimuli, when confronted with an array of unfamiliar, complex or incongruent clues (Furnham, & Ribchester, 1995).

As regards the term "intolerance", we may say that a person is intolerant to a stimulus when that stimulus is interpreted as a source of psychological discomfort or as a threat.

Ambiguity tolerance may be perceived either as a personality trait, or as a cognitive and emotional orientation. When seen as a personality variable, ambiguity tolerance is that trait which may be *generalized to the entire emotional and cognitive functioning of the individual, being a characteristic of one's cognitive style, faith and attitude systems, interpersonal and social functioning, as well as of one's behaviour during the problem solving process"* (Bochner, 1965). From a cognitive and emotional orientation perspective, we must note the position taken by Courtney, Kirkland and Viguerie in 1997, who identify four levels of ambiguity that an organisation may face when predicting the future: a sufficiently clear future, alternative possibilities for the future, a large array of possibilities

for the future and complete ambiguity. The organisation's strategy should take into account and reflect the type of ambiguity it is facing. The central conditions of entities such as enterprises, industries, national and regional economies, but also families and social networks are often characterised by terms such as "dynamic conditions", "turbulences", "transformations" or "discontinuities". The term of "change" serves as an umbrella term for all those mentioned before, referring, each and every one of them, in a certain manner, to significant, sometimes dramatic transitions.

Relevant changes in the organisational field occur on at least three levels: on a societal level, on an organisational level and on an individual level (Reiss, 2012). On an individual level, we may refer to promotions, professional burnout or even to the middle-age crisis affecting both the employees and the employers. On a societal level, the changes to be taken into account are those referring to globalization, automation, demographic changes, changes of the values and attitudes of the population, social trends, economical changes which have an impact on the buying power of citizens, international politics. Finally, on an organisational level, the changes affect all the sectors of an enterprise, starting with strategy changes, modifications of human resources, technological advancements, factors regarding competition, be it loyal or not, structural and cultural changes and so on (Harrison, 1994; Robbins, & Judge, 2012).

Furthermore, besides these changes which can be, to a certain extent, managed, we need to take into account a series of changes which cannot be controlled, such as global warming, natural disasters, life cycles (youth, maturity, and decline).

III. METHODOLOGY

3.1. Objectives of the study

The general objective of our paper is to acknowledge the important role played by ambiguity tolerance in a society where organisations are forced to quickly adapt to change. As far as the specific objectives of our research, they are as follows:

- Testing the relationship between ambiguity tolerance and adapting to change.
- Identifying the dimensions of ambiguity tolerance where the employees obtain lower scores.
- Highlighting possible differences between men and women as far as ambiguity tolerance is concerned.
- Identifying the possible differences between the scores obtained for ambiguity tolerance by the employees of a military unit and those of a private IT company.

3.2. Research hypotheses

H. 1. We assume that there is a significant correlation between the level of ambiguity

tolerance and the degree of adapting to generic change.

H.2. We assume that there is a significant correlation between the level of ambiguity tolerance and the degree of adapting to organisational change.

H. 3. We assume that ambiguity tolerance is moderated by the variable of gender.

H. 4. We assume that ambiguity tolerance is moderated by the type of organisation.

3.3. Participants

In order to verify the hypotheses we used a lot of 65 subjects, 42 female and 23 male, 24 of which were employed in a private IT company and 41 were civilian employees within a military unit.

3.4. Research Instruments

Our aim was, from the very beginning, to measure ambiguity tolerance on the one hand and to evaluate the attitude towards change on the other hand, taking into account both change as a general concept and change as seen within the specific realm of organisations. As far as the first concept, that of ambiguity tolerance, is concerned, we decided that the instrument able to provide the most relevant results is *MAT-50* (Measure of Ambiguity Tolerance), created by Norton in 1975.

With regards to attitude towards change, we chose to measure it by means of two different instruments, one meant to analyse beliefs and attitudes towards change in general, while the second focuses exclusively on organisational change.

The first of these tests, *Resistance to change*, belongs to S. Oreg and first appeared in Journal of Applied Psychology in 2003. It was developed to measure the individual's tendency of resisting to or avoiding changes that occur in the environment where they live and work, of generally disregarding change and even of objecting to a certain degree to change, no matter the situation or the type of change.

The attitude towards organisational change was measured by means of a test of our own construction, where we took into account similar tests from the United States and from France, choosing those elements which well fit the Romanian context.

3.5. Verifying hypotheses

Our first hypothesis assumed that: **"***there is a significant correlation between ambiguity tolerance and adapting to change, in the general meaning of the word".*

We chose to use the Pearson correlation to test this hypothesis; it showed a significant correlation between the two variables we measured ($r = 0.43$, for $p<0.01$)

Table 1: *The Pearson correlation matrix for Generic Change and Ambiguity Tolerance*

	Generic Change	Ambiguity Tolerance

Generic Change	Pearson Correlation	1	.430**
	Sig. (2-tailed)		.000
	N	65	65
Ambiguity Tolerance	Pearson Correlation	.430**	1
	Sig. (2-tailed)	.000	
	N	65	65

**. Correlation is significant at the 0.01 level (2-tailed).

This result tells us there is indeed a significant correlation between the attitude towards generic change and ambiguity tolerance, which could be translated by saying that, as people have a higher level of ambiguity tolerance, they also score better as far as adapting to generic change is concerned. We can therefore reject the null hypothesis and accept the first hypothesis of the research**.**

The second hypothesis of our research was the following: "*We assume that there is a significant correlation between the level of ambiguity tolerance and the degree of adapting to organisational change*".

We have again chosen to test the hypothesis using the Pearson correlation. The results were, once more, relevant, as we found a significant correlation between the two variables we measured ($r = 0.35$, for $p<0.01$). The results could be translated as a link between an individual's ambiguity tolerance and the way that individual adapts to organisational change, meaning that once ambiguity tolerance grows, so does the ability to cope with an organisational context governed by change.

Table 2: *The Pearson correlation matrix for Organisational Change and Ambiguity Tolerance*

		Organisational Change	Ambiguity Tolerance
Organisational Change	Pearson Correlation	1	.357**
	Sig. (2-tailed)		.004
	N	65	65
Ambiguity Tolerance	Pearson Correlation	.357**	1
	Sig. (2-tailed)	.004	
	N	65	65

**. Correlation is significant at the 0.01 level (2-tailed).

We can once again reject the null hypothesis and accept the hypothesis of the research.

One of the objectives established for this research was to identify the dimensions of ambiguity tolerance which might hinder the process of adapting to change, be it generic or organisational. To this purpose, we have used the bivariate Pearson correlation, analysing first

the correlations between the eight sub-scales of the instrument measuring Ambiguity Tolerance on the one hand and Generic Change on the other hand. The results reveal significant correlations for $p<0.01$ in the case of the following subscales: *Public Image* (r=0.32), *Problem Solving* (r=0.43), *Social* (r=0.34) and *Habit* (r=0.36), as well as significant correlations for $p<0.05$, in the case of the following sub-scales *Job Related* (r=0.25) and *Art Forms* (r=0.25).

Table 3: *The Pearson correlation matrix for the sub-scales of Ambiguity Tolerance and Generic Change*

		Generic Change
I Philosophy	Pearson Correlation	.203
	Sig. (2-tailed)	.106
	N	65
I Interpersonal Communication	Pearson Correlation	.232
	Sig. (2-tailed)	.063
	N	65
I Public Image	Pearson Correlation	.322**
	Sig. (2-tailed)	.009
	N	65
I Job Related	Pearson Correlation	.256*
	Sig. (2-tailed)	.040
	N	65
I Problem Solving	Pearson Correlation	.432**
	Sig. (2-tailed)	.000
	N	65
I Social	Pearson Correlation	.346**
	Sig. (2-tailed)	.005
	N	65
I Habit	Pearson Correlation	.367**
	Sig. (2-tailed)	.003
	N	65
I Art Forms	Pearson Correlation	.259*
	Sig. (2-tailed)	.037
	N	65

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

We have applied the same test in order to verify the relationship between the sub-scales of Ambiguity Tolerance and Organisational Change. The results were one more

conclusive, showing us significant correlations for $p<0.01$ in the case of the *Social* sub-scale ($r=0.51$) and significant correlations for $p<0.05$ in the case of the sub-scales *Public Image* ($r=0.26$) and *Problem Solving* ($r=0.30$).

Table 4: *The Pearson correlation matrix for the sub-scales of Ambiguity Tolerance and Organisational Change*

		Organisational Change
I Philosophy	Pearson Correlation	.095
	Sig. (2-tailed)	.451
	N	65
I Interpersonal Communication	Pearson Correlation	.153
	Sig. (2-tailed)	.223
	N	65
I Public Image	Pearson Correlation	.260*
	Sig. (2-tailed)	.037
	N	65
I Job Related	Pearson Correlation	.223
	Sig. (2-tailed)	.075
	N	65
I Problem Solving	Pearson Correlation	.300*
	Sig. (2-tailed)	.015
	N	65
I Social	Pearson Correlation	.514**
	Sig. (2-tailed)	.000
	N	65
I Habit	Pearson Correlation	.221
	Sig. (2-tailed)	.077
	N	65
I Art Forms	Pearson Correlation	.221
	Sig. (2-tailed)	.076
	N	65

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Based upon a comparative analysis of the two matrix tables we may conclude, on the one side, that the dimension of Ambiguity Tolerance which most facilitates adapting to change, be it generic or organisational, is the social one, while the dimensions which raise the highest issues and which obtained the lowest scores for a correlation with adapting to change are those of Philosophy and of Interpersonal Communication.

A possible interpretation of these results might be that, while on a social level the subjects manage to accept a certain degree of ambiguity tolerance and to use it to their own advantage in order to better adapt to an ever-changing environment, they face problems when trying to accept ambiguity on a philosophical, abstract level, as well as on an interpersonal communication level. We can only speculate as to the causes for this. We could however take into account the results of this research and to look for means for improving the way employees perceive ambiguity on a philosophical and communication level, so as to facilitate the process of adapting to an organisational environment.

The third hypothesis assumed that ambiguity tolerance was moderated by gender. In order to test its validity, we decided to use the t test for independent samples. The value of the t test for independent samples is not significant, t= -1.74, for p>.05. We may therefore conclude that there are no significant differences between men and women regarding ambiguity tolerance.

Table 5: *The t test for independent samples between men and women for the Ambiguity Tolerance variable*

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Ambiguity Tolerance	Equal variances assumed	.889	.349	-1.740	63	.087	-.23189
	Equal variances not assumed			-1.843	53.303	.071	-.23189

We may conclude that the third hypothesis is not confirmed and that we can therefore accept the null hypothesis.

The fourth and last hypothesis assumed that ambiguity tolerance is moderated by the type of organisation. Using the same t test for independent variables, we may notice that the value is a significant one, t=-3.78, p<0.05. Since a higher score for Ambiguity Tolerance means a lower degree to which the subjects are able to accept ambiguity, we may conclude that the employees of the military unit are less prepared to accept ambiguity as part of life.

Table 6. *The t test for independent samples between the employees of a private IT company and the civilian employees within a military unit for Ambiguity Tolerance*

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference

Ambiguity Tolerance	Equal variances assumed	1.593	.212	-3.787	63	.000	-.46206
	Equal variances not assumed			-3.943	54.347	.000	-.46206

We may say, based on the statistic verification that this hypothesis is sustained and the statistical hypotheses can be therefore rejected.

IV. CONCLUSIONS

It will be a surprise to no-one that being able to cope with change is essential in order to adapt to the environment and to evolve. The degree to which we do it or not are dependent upon countless factors, but we may intervene, to a certain extent, upon one of these: ambiguity tolerance. We consider that this paper has reached its main objective that of highlighting this precise link before the level of ambiguity tolerance of an individual and the way this individual manages to adapt to organisational change (Kotter, & Schlesinger, 1979).

Furthermore, by the verification of the hypotheses we were able to establish that the values of the two measured variables are not dependent on gender, but there is a correlation between them and the environment where an individual works - i.e. ambiguity tolerance and an easiness of adapting to organisational change seem to be favoured in an IT company, where the rapid progress of technology brings many changes on all institutional levels, unlike in the case of a military unit, where the rigid protocol allows for a smaller fluctuation of the work context.

It is up to debate whether this difference could be explained as a consequence of the psychological profile of the employees, who gravitate towards one environment or the other based on their own personality, or whether it is the environment itself that modifies, to a certain extent, the attitude of the employees towards unpredictable, new, ambiguous situations.

It was of paramount importance to us to highlight the sub-scales of the Ambiguity Tolerance concept which obtained the highest and the lowest scores, as this distinction could help us see the way to intervene, in order to optimize the results. Thus, we noticed that our subjects were able to tolerate ambiguity in social relationships, but tend to reject it when confronted with philosophical or moral issues.

Our attempted explanation of this phenomenon is a simple one: we are ready to go into an in-depth analysis of an event when it is strictly related to an individual, as we are aware that there is a multitude of factors which may intervene in the decision making process, and we are also aware that all these factors need to be taken into account when judging, for example, the behaviour of a colleague of ours in a given context. We find it harder however

to take all the "mitigating circumstances" into account when talking about a more generic moral concept. We are rather tempted to decide that something is either good or bad, to group everything into well-defined categories (Bauman, 1998).

Even though this type of categorization may come in handy in allowing us to make quick decisions (as it is certainly easier to choose from a limited set of responses than to thoroughly analyse all possible responses before making a conscientious decision), the consequences can be felt at the level of comfort that is experienced in given situations. When we decide, based on an opinion long before formed, that one of the employer's decisions is to our disadvantage or is immoral, we set limits to ourselves, we establish, from that very moment, a state of tension that we will have to deal with throughout the entire changing process. A higher malleability of our approach to changes, a more flexible attitude - all in all, a higher ambiguity tolerance - can only support the construction of a less rigid, less restraining, less restrictive way of life (Schere, 1982). It could, therefore, help us diminish the stress to which our organism is subjected on a daily basis, stress due, in part, to external factors, but which could be moderated by a better management of the factors which pertain solely to us.

This paper, far from being an exhaustive one, represents a first step towards the improvement of the way individuals perceive organisational change. Once we have shown the close relationship between an individual's ability to adapt to change and his or her tolerance towards the perceived stimuli, the next step shall be that of outlining a strategy for increasing ambiguity tolerance, in the hopes of thus also causing an increase in our ability to adapt to organisational change.

Our goal for the future is to create a strategy that managers may implement in order to increase the employees' ambiguity tolerance, so that they may have a chance to better adapt to changes within the organisation.

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